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JUL 25 9 33 AM '96

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM  
EPA CONTRACT 68-W5-0009

19 July 1996  
11098-011-001-1227-50  
DC No. A-375

Mr. Chuck Schwer  
State of Vermont  
Agency of Natural Resources  
Department of Environmental Conservation  
Hazardous Materials Management Division  
Waterbury, VT 05671-0404

Subject: Draft Site Inspection Prioritization Report  
Morse Gravel Pit  
Pownal, Vermont  
CERCLIS No. VTD988366696  
TDD No. 95-08-0003

Dear Mr. Marshall:

Enclosed are two copies of the Draft Site Inspection Prioritization (SIP) Report for the Morse Gravel Pit property in Pownal, Vermont. Comments are due by 30 August 1996, six weeks after the submission of this document and should be directed in writing on or before this date to Mr. Donald Smith, U.S. EPA-New England Site Assessment Manager.

Please contact the undersigned at (617) 229-6430 if you have any questions regarding this report.

Very truly yours,

ROY F. WESTON, INC.  
Region I START

Alison J. Perry  
Site Leader

Joseph Schmidl  
Project Leader

AJP:ajp

Enclosures

cc: S. Hayes (EPA Task Monitor)  
D. Smith (EPA Site Assessment Manager)

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**DRAFT SITE INSPECTION PRIORITIZATION REPORT  
FOR  
MORSE GRAVEL PIT  
POWNA, VERMONT**

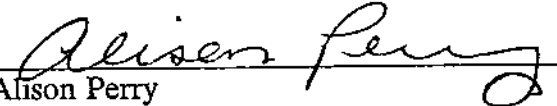
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TDD No. 95-08-0003**

Prepared by:

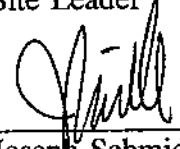
Roy F. Weston, Inc. (WESTON®)  
Superfund Technical Assessment and Response Team (START)  
217 Middlesex Turnpike  
Burlington, MA 01803

19 July 1996

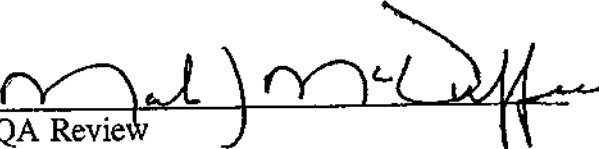
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Alison Perry  
Site Leader

7/19/96  
Date

  
Joseph Schmidl  
Project Leader

7/22/96  
Date

  
QA Review

7/22/96  
Date

## **DISCLAIMER**

This report was prepared solely for the use and benefit of the U.S. Environmental Protection Agency (EPA-New England), Office of Site Remediation and Restoration for the specific purposes set forth in the contract between the EPA-New England and the Roy F. Weston, Inc. (WESTON®), Superfund Technical Assessment and Response Team (START). Professional services performed and reports generated by START have been prepared for EPA-New England purposes as described in the START contract. The information, statements, and conclusions contained in the report were prepared in accordance with the statement of work, and contract terms and conditions. The report may be subject to differing interpretations or misinterpretation by third parties who did not participate in the planning, research or consultation processes. Any use of this document or the information contained herein by persons or entities other than the EPA-New England shall be at the sole risk and liability of said person or entity. START, therefore, expressly disclaims any liability to persons other than the EPA-New England who may use or rely upon this report in any way or for any purpose.

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## **INTRODUCTION**

The Roy F. Weston, Inc. (WESTON®) Superfund Technical Assessment and Response Team (START) was requested by the Region I U.S. Environmental Protection Agency New England (EPA-New England) Office of Site Remediation and Restoration to perform a Site Inspection (SI) of the Morse Gravel Pit property on Route 7 in Pownal, Vermont. Tasks were conducted in accordance with the SI scope of work and technical specifications provided by EPA-New England. A Preliminary Assessment (PA) Report for the Morse Gravel Pit property was prepared by the Vermont Department of Environmental Conservation (VT DEC) on 20 September 1991. Following the acquisition of additional information, the final PA was completed on 15 September 1994 [1]. On the basis of the information provided in the PA report, the Morse Gravel Pit SI was initiated.

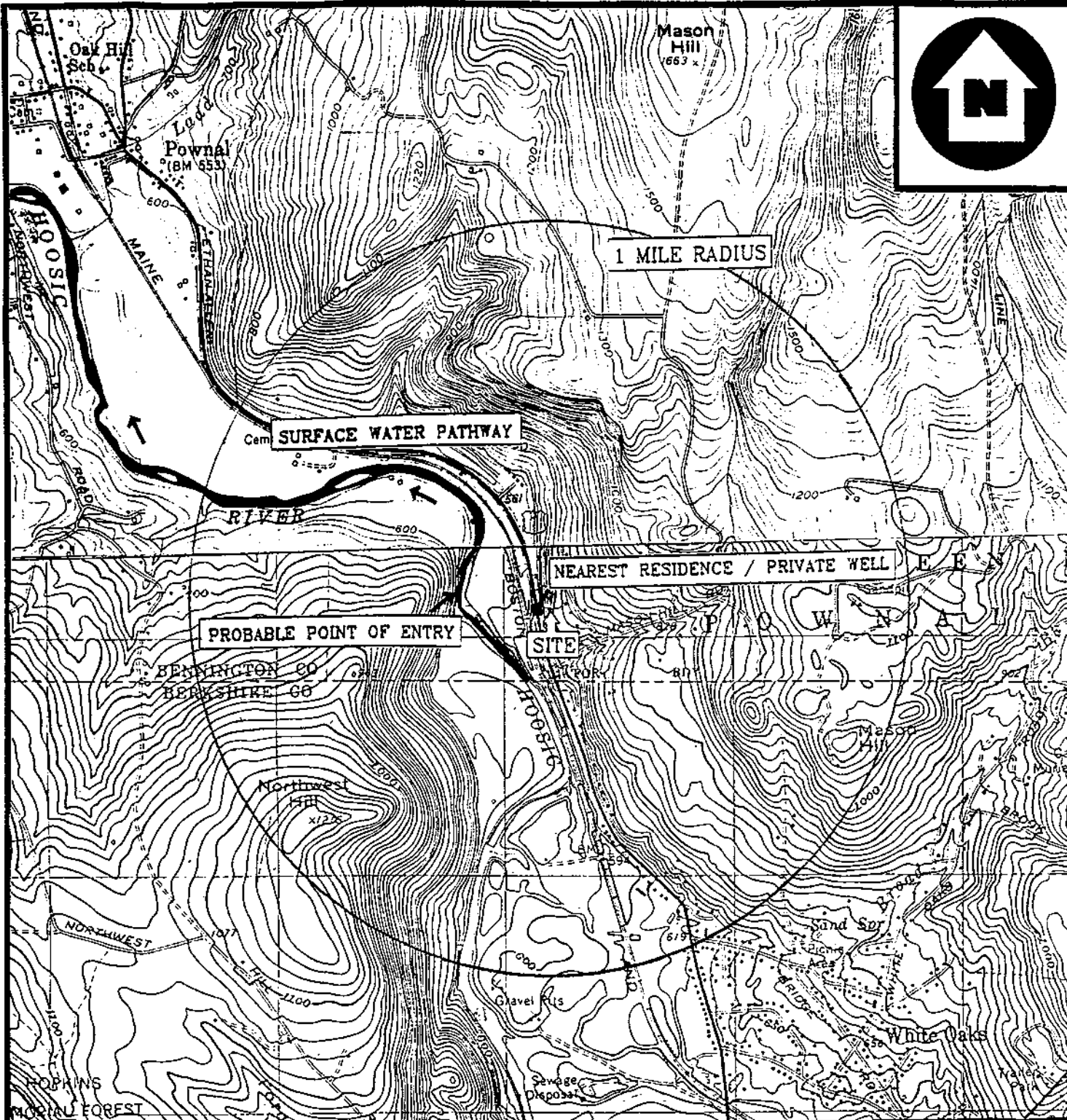
Background information used in the generation of this report was obtained through file searches conducted at EPA and VT DEC, telephone interviews with town officials, conversations with persons knowledgeable of the Morse Gravel Pit property and conversations with other Federal, State, and local agencies.

This package follows the guidelines developed under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, commonly referred to as Superfund. However, these documents do not necessarily fulfill the requirements of other EPA regulations such as those under the Resource Conservation and Recovery Act (RCRA) or other Federal, State, or local regulations. SIs are intended to provide a preliminary screening of sites to facilitate EPA's assignment of site priorities. They are limited efforts and are not intended to supersede more detailed investigations.

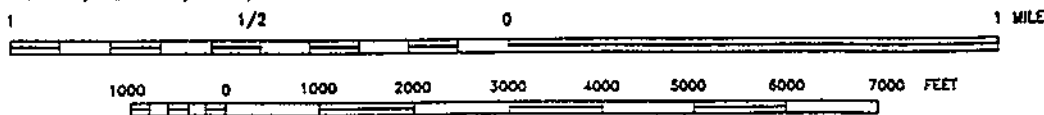
## **SITE DESCRIPTION**

The Morse Gravel Pit is located at 42° 48' 48.2" North latitude and 73° 12' 49.4" West longitude in Pownal, Bennington County, Vermont. The 5-acre Morse Gravel Pit property is located 0.33 miles north of the Massachusetts border on the eastern side of Route 7 (Figure 1) [1, p. 1; 2; 3].

The property consists of approximately 2 acres of exposed bedrock with limited vegetation and 3 acres of woodlands. There are three entrances to the property. The main entrance originates off Mr. Morse's private driveway north of the gravel pit; the second entrance, the old access road to the Gravel Pit, connects to Route 7 south of the driveway and is currently impassable; and the third accessway is from the east off State Line Drive (Figure 2) [4, p. 3].



BASE MAP IS A PORTION OF THE FOLLOWING 7.5' X 7.5' U.S.G.S. QUADRANGLES:  
POWNAL, VERMONT, 1954, AND WILLIAMSTOWN, MASSACHUSETTS, 1973



### LOCATION MAP

MORSE GRAVEL PIT  
ROUTE 7  
POWNAL, VERMONT

**WESTON**®  
MANAGERS DESIGNERS/CONSULTANTS

REGION I SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

TDD No.

95-08-0003

DRAWN BY:

A. PERRY

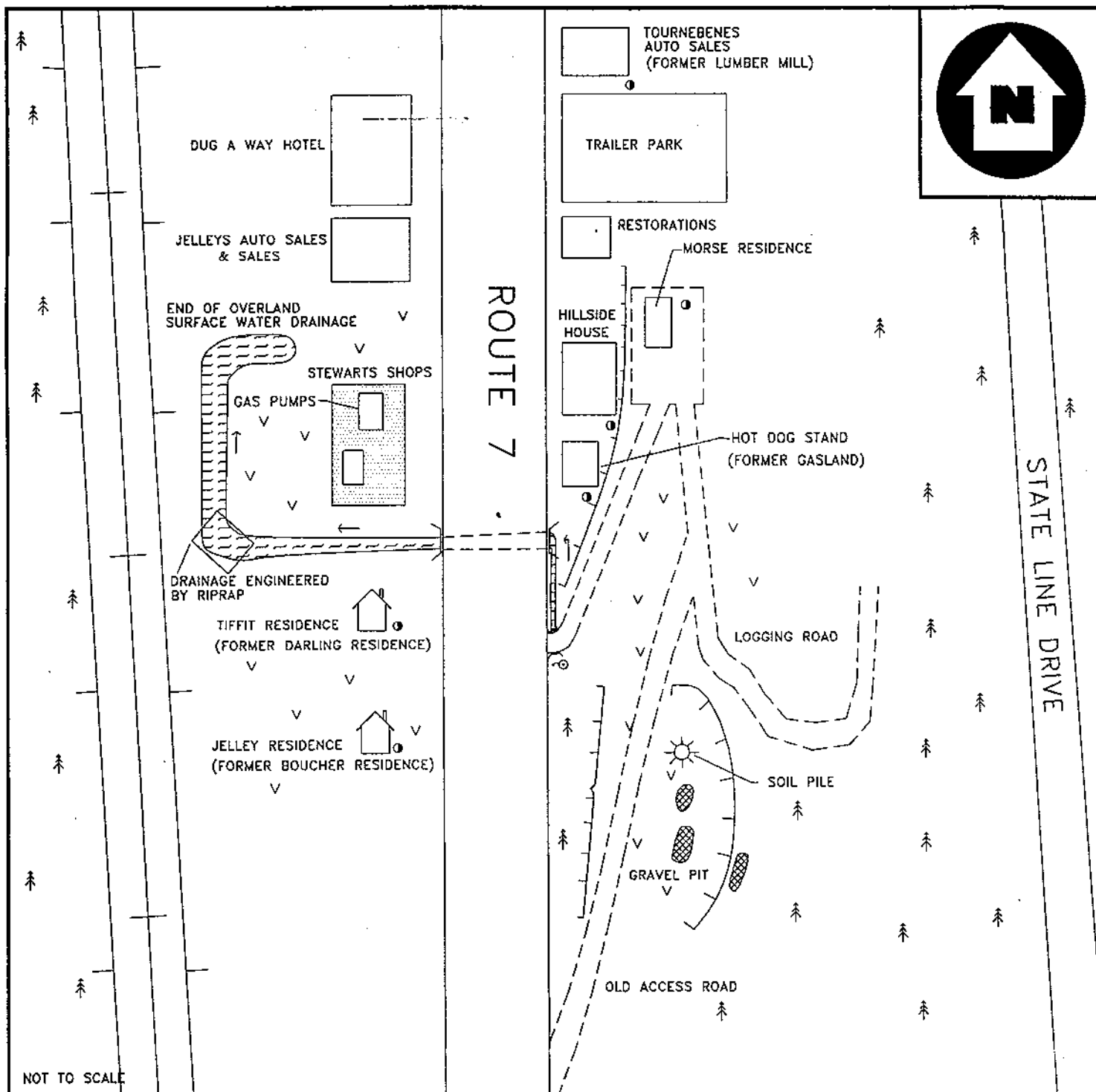
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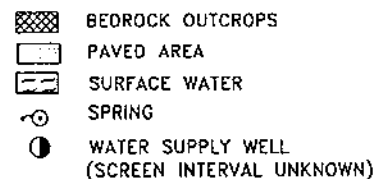
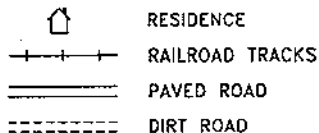
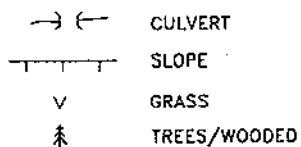
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FIGURE 1



LEGEND



### SITE SKETCH

MORSE GRAVEL PIT  
ROUTE 7  
POWNAAL, VERMONT



REGION I SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

TDD No.  
95-08-0003

DRAWN BY:  
A. PERRY

DATE 5/17/96

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FIGURE 2



## OPERATIONAL AND REGULATORY HISTORY AND WASTE CHARACTERISTICS

The Morse Gravel Pit property began operations as a gravel pit in 1948 by an unknown operator [5, p. 2]. In 1964, Mr. Charles Morse, the current owner, purchased the land and continued to use the property as a gravel pit. Mr. Morse estimated that the elevation of the gravel pit had decreased by at least 4 feet from 1974 to 1991. The gravel pit was excavated to bedrock and has only intermittently been used from 1981 to 1991 [5, pp. 1, 2].

On 19 November 1974, a reporter for the *North Adams Transcript* notified the Director of the Vermont Department of Water Resources (VT DWR) that the Berkshire-Pittsfield Septic Company was allegedly illegally dumping liquid waste from Stanley Tool of Shaftsbury, Vermont. According to the reporter, the dumping occurred in "an abandoned gravel pit in Pownal, Vermont" [6, p. 1]. Specific reference to the Morse Gravel Pit was not made.

The plant engineer at Stanley Tool verified the removal of wastes from the property by the Berkshire-Pittsfield Septic Company. The wastes had formerly been disposed of to the North Adams Sewer System, but this disposal had ceased when the waste failed to meet their current permit requirements. An estimated 5,000 gallons of liquid waste were removed per week from a lagoon that collected waste from the water wash systems of three paint booths, two of which contained acrylic paint and one of which contained caustic soda [6, pp. 1, 2].

Allegedly, the illegal dumping of wastes from Stanley Tool occurred on the Morse Gravel Pit property from November to December 1974 [6, p. 1]. Mr. Morse maintains that no such activity occurred on his property and that the wastes were disposed of at the North Adams Sewage Treatment Plant. Approximately 7,000 cubic yards (yd<sup>3</sup>) of gravel have been removed for commercial use since the alleged dumping occurred [5, p. 1]. The location(s) of the removed gravel is unknown [6, p. 1].

Mr. Sezenpaniak of Berkshire-Pittsfield Septic Company verified the disposal of the liquid waste in "a gravel pit in Pownal" and requested information in order to obtain a permit to continue disposal of the liquid waste on the property [6, p. 1]. The VT DWR advised the company to ship the wastes to one of the firms located outside Vermont that had been identified as being able to properly treat and dispose of the wastes [6, p. 2]. As per a telephone conversation on 22 May 1996, Mr. Sezenpaniak denied the disposal of wastes in a gravel pit in Pownal, Vermont. The wastes were reportedly disposed of at the North Adams Treatment Plant [29].

On 2 December 1974, a sample was collected from the first waste lagoon at the inlet pipe at Stanley Tool to characterize the wastes that were allegedly disposed of at the gravel pit [6, p. 1]. On 11 December 1974, a sample was collected from the second lagoon in order to determine the effects that settling, dilution by rainwater, and a longer detention time had on the sludge [6, p. 2]. The samples were analyzed for water quality parameters including copper, manganese, iron, chromium, nickel, zinc, lead and aluminum. Eight metals were detected at relatively high concentrations.

On 11 December 1974, two 10-foot deep test pits were allegedly dug in the Morse Gravel Pit. The soils were found "to be extremely permeable and would most likely provide little or no treatment of the metals contained within the waste from Stanley Tool" [6, p. 2]. No reference to any soil staining or other evidence of disposal was noted.

On 24 December 1974, three drinking water samples were collected from nearby private drinking water wells by VT DWR. The samples were collected from the Darling Residence, the bathroom at Gas Land, and the Lumber Mill. The samples were analyzed by the Vermont Water Quality Division for selected metals including aluminum, chromium, copper, iron, lead, nickel and zinc [6, pp. 5-7]. No metals were detected above reference criteria.

On 22 April 1991, VT DEC conducted an on-site reconnaissance on the property as part of a Preliminary Assessment (PA). Following the acquisition of additional information, the final PA was completed on 15 September 1994. No evidence of stressed vegetation or soil staining was noted and no run-off or drainage routes were identified. Mr. Morse maintained that no dumping occurred on his property and that the liquid wastes from Stanley Tool were disposed of at the North Adams Treatment Plant [5, pp. 1, 2].

On 10 June 1992, the VT DEC Hazardous Materials Management Division (HMMD) collected drinking water samples from private drinking water wells on and near the Morse Gravel Pit property [7]. The samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8240, semivolatile organic compounds (SVOCs) by EPA Method 8270, and selected metals. No VOCs or SVOCs were detected in any sample. Zinc, the only metal detected in any of the samples, was detected in the Morse residence well at a concentration of 52 ppb with a detection limit of 40 ppb [7]. This concentration is most likely within natural ranges.

Table 1 presents identified structures or areas on the Morse Gravel Pit property that are documented or potential sources of contamination, the containment factors associated with each source, and the relative location of each source.

Table 1

Source Evaluation for Morse Gravel Pit

Source Area	Containment Factors	Spatial Location
Gravel Pit	None	Center of property

[6, p. 1]

Table 2 summarizes the types of potentially hazardous substances which have been allegedly disposed on the Morse Gravel Pit property.

**Table 2**

**Hazardous Waste Quantity for Morse Gravel Pit**

Substance	Quantity or Volume/Area	Years of Use/Storage	Years of Disposal	Source Area
Liquid Waste from Lagoons at Stanley Tool containing wastes from the wash systems of paint booths containing acrylic paint or caustic soda.	30,000 gallons	None	1972	Gravel Pit

[6, pp. 1, 2]

No RCRA or CERCLA sites are located within a 1-mile radius of the Morse Gravel Pit property [8; 9].

**WASTE/SOURCE SAMPLING**

On 2 December 1974, a sample was collected from the first waste lagoon at the inlet pipe at Stanley Tool to characterize the wastes that were allegedly disposed of at the gravel pit [6, p. 1].

On 11 December 1974, an on-site reconnaissance of the Stanley Tool property was conducted by VT DWR. Two interconnected lagoons were observed to be separated by a small ditch which acted as a weir. Berkshire-Pittsfield Septic Company, the contracted waste hauler, had been conducting its weekly pumping from the first lagoon only. A second sample was collected from the second lagoon in order to determine the effect that settling, dilution by rainwater, and a longer detention time had on the sludge. The sample was analyzed for metals content at Regulatory Services at the University of Vermont [6, p. 2].

Table 3 summarizes the analytical results from the sludge samples collected from the lagoons at Stanley Tool. The potable water standards for 1972 are also listed in the table.

**Table 3**

**Summary of Analytical Results  
Sludge Samples Collected from Stanley Tool in December 1972**

Substance	Concentrations of samples collected from the first Lagoon (ppm)	Concentrations of samples collected from the second Lagoon (ppm)	Potable Water Standards (ppm)
Aluminum	15.0	ND	NA
Chromium	3.05	0.20	0.05
Copper	0.17	0.04	1.0
Iron	9.35	1.35	0.30
Lead	5.01	0.70	0.05
Manganese	0.85	0.07	0.05
Nickel	23.0	1.08	NA
Zinc	7.70	0.30	5.0

ND = Not detected; detection limit unknown.

NA = Information not available.

ppm = parts per million.

[6, p. 4]

### **GROUNDWATER PATHWAY**

The overburden in the area is characterized by small pockets of fine silt or clay mixed with gravel and fine sand [6, p. 2]. The underlying bedrock is composed largely of Cheshire Quartzite. This is a massive white vitreous quartzite of Lower Cambrian age [10]. No bedrock formation mapped within 4-radial miles of the property exhibits karst characteristics. The mean annual precipitation for Pownal, as estimated from precipitation in Reedsboro, Vermont, is 49.08 inches [11].

Towns within a 4-mile radius of the Morse Gravel Pit property include Clarksburg, North Adams and Williamstown, Massachusetts; Berlin and Petersburg, New York; and Pownal and Shaftsbury, Vermont. Pownal, North Adams and Williamstown are the only towns within 4-radial miles that have public water supplies [2; 12; 14; 15; 16; 17; 18].

Pownal is served by five independent sources. Two surface water intakes, called the Pownal Tannery and Pownal Water Company intakes, are not located on the downstream pathway from Morse Gravel Pit. The Lampman system, a spring fed source, and the Alta Gardens Estate bedrock well are not located within 4-radial miles of Morse Gravel Pit. The remaining two sources are groundwater sources. The Evergreen Mobile Home well, located 0.25 miles south of the Morse Gravel Pit property, serves 30 people. The Pownal Fire District No. 3 buys water from the Williamstown public water system and serves 130 people. The population served by the Fire District has been included in the service population for Williamstown [30].

The North Adams Water Department maintains four surface water intakes and one emergency groundwater well. The system is blended but none of the intakes are located along the 15-mile downstream pathway from Morse Gravel Pit and the emergency well does not lie within 4-radial miles of the property [17].

The Williamstown public water system consists of three deep overburden aquifer wells and three inactive surface water intakes. No one source provides more than 40% of the total water for the system; the 6,430 service population is therefore apportioned evenly between the three active sources of the system. The Stetson Road Wells (GP No. 1 and No. 2), located 2.5 miles southeast of the Morse Gravel Pit property, are the only active sources that lie within a 4-mile radius of the Morse Gravel Pit property. The surface water intakes, located on Rattlesnake Reservoir, Paul Brook, and Sherman Springs, are located upstream of the property and are not actively used [18].

Table 4 summarizes the public drinking water sources within 4-radial miles of the property.

**Table 4**

**Public Groundwater Supply Sources Within 4-Radial Miles of Morse Gravel Pit**

Distance/ Direction from Site (miles)	Source Name	Location of Source <sup>a</sup>	Estimated Population Served	Source Type <sup>b</sup>
0.25 South	Evergreen Mobile Home	Pownal	30	Unknown
2.5 Southeast	GP Well No. 1	Williamstown	2,143	Overburden
2.5 Southeast	GP Well No. 2	Williamstown	2,143	Overburden

<sup>a</sup>Indicates Town in which well is located.

<sup>b</sup>Overburden, Bedrock, or Unknown.

[18; 30]

Table 5 summarizes the population that uses drinking water within 4-radial miles of the Morse Gravel Pit property. The population that uses private drinking water wells was estimated using equal distribution calculations of U.S. Census CENTRACTS data identifying population, households and private water wells for "Block Groups" which lie wholly or in part within individual radial distance rings measured from potential sources on the Morse Gravel Pit property [19].

**Table 5**

**Estimated Drinking Water Populations Served by Groundwater Sources  
Within 4-Radial Miles of Morse Gravel Pit**

Radial Distance From Morse Gravel Pit (miles)	Estimated Population Served by Private Wells	Estimated Population Served by Public Wells	Total Estimated Population Served by Groundwater Sources Within the Ring
0.00 < 0.25	12	30	42
0.25 < 0.50	37	0	37
0.50 < 1.00	150	0	150
1.00 < 2.00	594	0	594
2.00 < 3.00	898	4,286	5,184
3.00 < 4.00	1,082	0	1,082
<b>TOTAL</b>	<b>2,773</b>	<b>4,316</b>	<b>7,089</b>

[18; 19; 30]

On 24 December 1974, three groundwater samples were collected from private drinking water wells by the VT DWR. The samples were collected from the Darling Residence, the bathroom at Gas Land, and the Lumber Mill. The samples were analyzed by the Vermont Water Quality Division for selected metals including aluminum, chromium, copper, iron, lead, nickel and zinc [6, pp. 5-7]. No metals were detected above reference criteria.

On 10 June 1992, the VT DEC Hazardous Materials Management Division (HMMD) collected drinking water samples from private drinking water wells on the Morse, Hillside and Boucher residences. The samples were analyzed for VOCs by EPA Method 8240, SVOCs by EPA Method 8270, and selected metals. No VOCs or SVOCs were detected in any sample. Zinc, the only metal detected in any of the samples, was detected in the Morse residence well at a concentration of 52 ppm with a detection limit of 40 ppm. This concentration is most likely within natural ranges. There is no Maximum Contaminant Level (MCL) for zinc in drinking water [7].

Table 6 is a summary of inorganic elements detected through analyses of VT DEC HMMD drinking water samples. For each sample location, an element is listed if it is detected at three times or greater than the reference sample concentration (Hillside). However, if the element is not detected in the reference sample, the reference sample's sample detection limit (SDL) (for inorganic analyses) is used as the reference value. These elements are listed if they occurred at a value equal to or greater than the reference sample's SDL and are designated by their approximate relative concentration above these values.

**Table 6**  
**Summary of Analytical Results**  
**Drinking Water Sample Analysis for Morse Gravel Pit**

Sample Location	Compound/ Element	Sample Concentration	Reference Concentration	Comments
Morse	<b>INORGANICS</b>			
	Zinc	52 ppb	40 U ppb	1.3 × SDL

U = Indicates the compound was analyzed for, but not detected; the reported value is the detection limit.

ppb = Parts per billion.

SDL = Sample Detection Limit.

[7]

## **SURFACE WATER PATHWAY**

Surface water runoff drains in two directions. The runoff from the southern portion of the property drains southerly along the old access roadway. Drainage on the northern portion of the property flows westerly towards Route 7 through a naturally-formed channel in the side of the hill. All of this flow is eventually collected in a drainage swale which runs northerly along the east side of Route 7 [4, pp. 1-3].

A groundwater spring located south of the Morse driveway along Route 7, flows northerly through a culvert beneath the Morse driveway. Engineered drainage routes conduct the water 500 feet along Route 7 and through another culvert beneath Route 7. The surface water then runs along the southern edge of the Stewarts Shop property, is directed northerly through an engineered rip-rap drainage ditch and continues behind the shop adjacent to the railroad tracks. The water pools at the northwestern corner of the Stewarts Shop property adjacent to a steep railroad grade. No springs were noted by START personnel on the other side of the railroad grade [4, pp. 1-3].

Based on observations during the on-site reconnaissance, there is no overland flow to a permanent surface water body. The overland flow route observed on 16 May 1996 by START personnel is likely intermittent due to seasonal variances [4, pp. 1-3].

The probable point of entry (PPE) to surface water from the property is through groundwater discharge to the Hoosic River, approximately 2,500 feet west of the property [2; 3]. The 15-mile downstream pathway continues along the Hoosic River through Vermont and ends 9.5 miles downstream of the New York state line. The Hoosic River in Pownal, Vermont is closed to the consumption of brown trout due to polychlorinated biphenyl (PCB) contamination from sources upstream of the property in Massachusetts [20]. Table 7 summarizes the waterbodies located along the 15-mile downstream pathway from Morse Gravel Pit.

**Table 7**

**Water Bodies Along the 15-mile Downstream Pathway from Morse Gravel Pit**

Surface Water Body	Descriptor <sup>a</sup>	Length of Reach (miles)	Flow Characteristics (cfs) <sup>b</sup>	Length of Wetlands (miles)
Hoosic River	Mod. to Lg. Stream	15	238.5	7

<sup>a</sup> Minimal stream < 10 cfs. Small to moderate stream 10-100 cfs. Moderate to large stream > 100-1,000 cfs. Large stream to river > 1,000-10,000 cfs. Large river > 10,000-100,000 cfs. Very large river > 100,000 cfs. Coastal tidal waters (flow not applicable). Shallow ocean zone or Great Lake (flow not applicable). Moderate depth ocean zone or Great Lake (flow not applicable). Deep ocean zone or Great Lake (flow not applicable). Three-mile mixing zone in quiet flowing river 10 cfs or greater.

<sup>b</sup> Cubic feet per second.

[2; 3; 21; 22; 23; 24; 25, p. 152]

No surface water intakes or sensitive environments other than wetlands are located along the 15-mile downstream pathway [26; 27]. The Hoosic River is protected under the Clean Water Act. There are approximately 7 miles of wetlands frontage located along the downstream pathway from the Morse Gravel Pit [21; 22; 23; 24; 25].

No surface water samples have been collected to date.

## **SOIL EXPOSURE PATHWAY**

One person resides on the Morse Gravel Pit property. An estimated 400 people reside within a 1-mile radius of the Morse Gravel Pit property [19]. No schools or day-care facilities are located within 200 feet of the property [4, pp. 1-3]. No shallow soil samples have been collected on the property.

## **AIR PATHWAY**

One person resides on the Morse Gravel Pit property. An estimated 6,366 people reside within a 4-mile radius of Morse Gravel Pit [19].



The population within 4-radial miles of the property was estimated using equal distribution calculations of U.S. Census CENTRACTS data identifying population, households, and private water wells for "Block Groups" which lie wholly or partly within individual radial distance rings measured from potential sources on the property. Table 8 describes the population distribution within 4-radial miles of the property.

**Table 8**

**Estimated Population Within 4-Radial Miles of Morse Gravel Pit**

Radial Distance From Morse Gravel Pit (miles)	Estimated Population
0.00 < 0.25	19
0.25 < 0.50	57
0.50 < 1.00	230
1.00 < 2.00	1,008
2.00 < 3.00	1,905
3.00 < 4.00	3,147
TOTAL	6,366

[19]

Approximately 396 acres of wetlands are located within 4-radial miles of the property [21; 22; 23; 24]. Table 9 describes the sensitive environments located within 4-radial miles of Morse Gravel Pit.

**Table 9**

**Sensitive Environments Located Within 4-Radial Miles of Morse Gravel Pit**

Radial Distance from Morse Gravel Pit (miles)	Sensitive Environment/Species (status)
0.00 < 0.25	Three habitats for State-concerned species
	Three habitats for State-threatened species
0.25 < 0.50	3 acres of wetlands
0.50 < 1.00	1 acres of wetlands
	Two habitats for State-concerned species
	One Federal candidate
1.00 < 2.00	25 acres of wetlands
	10 habitats for State-concerned species
	Six habitats for State-threatened species
2.00 < 3.00	132 acres of wetlands
	Four habitats for State-concerned species
	Six habitats for State-threatened species
3.00 < 4.00	235 acres of wetlands
	24 habitats for State-concerned species
	15 habitats for State-threatened species

[21; 22; 23; 24; 26; 27; 28]

No air samples have been collected to date. No readings above background were noted by START personnel during the on-site reconnaissance.

## SUMMARY

The Morse Gravel Pit (Morse Gravel Pit) is located in Pownal, Bennington County, Vermont. The 5-acre property is located 0.33 miles north of the Massachusetts border on the eastern side of Route 7.

The property consists of approximately 2 acres of exposed bedrock with limited vegetation and 3 acres of woodlands. There are three entrances to the property. The main entrance originates off Mr. Morse's private driveway north of the gravel pit; the second entrance, the old access road to the Gravel Pit, connects to Route 7 south of the driveway and is currently impassable; and the third accessway is from the east off State Line Drive.

The Morse Gravel Pit property began operations as a gravel pit in 1948 by an unknown operator. In 1964, Mr. Charles Morse, the current owner, purchased the land and continued to use the property as a gravel pit. Mr. Morse estimated that the elevation of the gravel pit had decreased by at least 4 feet from 1974 to 1991. The gravel pit was excavated to bedrock and has only intermittently been used from 1981 to 1991.

On 19 November 1974, a reporter for the *North Adams Transcript* notified the Director of the Vermont Department of Water Resources (VT DWR) that the Berkshire-Pittsfield Septic Company was allegedly illegally dumping liquid waste from Stanley Tool of Shaftsbury, Vermont. According to the reporter, the dumping occurred in "an abandoned gravel pit in Pownal, Vermont". Specific reference to the Morse Gravel Pit was not made.

The plant engineer at Stanley Tool verified the removal of wastes from the property by the Berkshire-Pittsfield Septic Company. The wastes had formerly been disposed of to the North Adams Sewer System, but this disposal had ceased when the waste failed to meet their current permit requirements. An estimated 5,000 gallons of liquid waste were removed per week from a lagoon that collected waste from the water wash systems of three paint booths; two of which contained acrylic paint and one of which contained caustic soda.

Allegedly, illegal dumping of wastes occurred on the Morse Gravel Pit property from November to December 1974. Mr. Morse maintains that no such activity occurred on his property and that the wastes were disposed of at the North Adams Sewage Treatment Plant. Approximately 7,000 cubic yards (yd<sup>3</sup>) of gravel have been removed from the property for commercial use since the alleged dumping occurred. The location(s) of the removed gravel is unknown.

Mr. Sezenpaniak of Berkshire-Pittsfield Septic Company verified the disposal of the liquid waste in "a gravel pit in Pownal" and requested information in order to obtain a permit to continue disposal of the liquid waste on the property. The VT DWR advised the company to ship the wastes to one of the firms located outside Vermont that had been identified as being able to properly treat and dispose of the wastes. As per a telephone conversation on 22 May 1996, Mr. Sezenpaniak denied the disposal of wastes in a gravel pit in Pownal, Vermont. The wastes were reportedly disposed of at the North Adams Treatment Plant.

On 24 December 1974, three drinking water samples were collected from nearby private drinking water wells by VT DWR. The samples were collected from the Darling Residence, the bathroom at Gas Land, and the Lumber Mill. The samples were analyzed by the Vermont Water Quality Division for selected metals including aluminum, chromium, copper, iron, lead, nickel and zinc. No metals were detected above reference criteria.

On 22 April 1991, the Vermont Department of Environmental Conservation (VT DEC) conducted an on-site reconnaissance on the property as part of a Preliminary Assessment (PA). Following the acquisition of additional information, the final PA was completed on 15 September 1994. No evidence of stressed vegetation or soil staining was noted and no run-off or drainage routes were identified. Mr. Morse maintained that no dumping occurred on his property and that the liquid wastes from Stanley Tool were disposed of at the North Adams Treatment Plant.

On 10 June 1992, the VT DEC Hazardous Materials Management Division (HMMD) collected drinking water samples from private drinking water wells on and near the Morse Gravel Pit property. The samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8240, semivolatile organic compounds (SVOCs) by EPA Method 8270, and selected metals. No VOCs or SVOCs were detected in any sample. Zinc, the only metal detected in any of the samples, was detected in the Morse residence well at a concentration of 52 ppb with a detection limit of 40 ppb. This concentration is most likely within natural ranges.

An estimated 329 people served by groundwater sources within 1-radial mile of the property; an estimated 7,087 people are served within 4-radial miles of the property.

Surface water runoff drains in two directions. The runoff from the southern portion of the property drains southerly along the old access roadway. Drainage on the northern portion of the property flows westerly towards Route 7 through a naturally-formed channel in the side of the hill. All of this flow is eventually collected in a drainage swale which runs northerly along the east side of Route 7.

A groundwater spring, located south of the Morse driveway along Route 7, flows northerly through a culvert beneath the Morse driveway. Engineered drainage routes conduct the water 500 feet along Route 7 and through another culvert beneath Route 7. The surface water then runs along the southern edge of the Stewarts Shop property, is directed northerly through an engineered rip-rap drainage ditch, and continues behind the shop adjacent to the railroad tracks. The water pools at the northwestern corner of the Stewarts Shop property adjacent to a steep railroad grade. No springs were noted by START personnel on the other side of the railroad grade. Based on observations during the on-site reconnaissance, there is no overland flow to a permanent surface water body. The overland flow route observed on 16 May 1996 by START personnel is likely intermittent due to seasonal variances.

The probable point of entry (PPE) to surface water for the property is groundwater discharge to the Hoosic River, approximately 2,500 feet west of the property. The 15-mile downstream pathway continues along the Hoosic River through Vermont and ends 9.5 miles into New York State. The Hoosic River in Pownal, Vermont is closed to the consumption of brown trout due to polychlorinated biphenyl (PCB) contamination.

No surface water intakes or sensitive environments other than wetlands are located along the 15-mile downstream pathway. The Hoosic River is protected under the Clean Water Act. There are approximately 7 miles of wetlands frontage located along the downstream pathway from the Morse Gravel Pit.

One person resides on the Morse Gravel Pit property. An estimated 400 people reside within a 1-mile radius of the Morse Gravel Pit property and an estimated 6,366 people reside within 4-radial miles. No schools or day-care facilities are located within 200 feet of the property.

Sensitive environments located within 4-radial miles include 396 acres of wetlands, 43 State-concerned species, 32 State-threatened species, and one candidate for Federal endangered status.

**MORSE GRAVEL PIT  
REFERENCES**

- [1] VT DEC (Vermont Department of Environmental Conservation). 1991. Preliminary Assessment, Morse Gravel Pit. Prepared for U.S. Environmental Protection Agency. 20 September.
- [2] USGS (U.S. Geological Survey). 1988. Berlin Quadrangle, NY. 7.5-minute series topographic map.
- [3] USGS (U.S. Geological Survey). 1988. North Adams Quadrangle, MA. 7.5-minute series topographic map.
- [4] START. 1995. Field Logbook for Morse Gravel Pit Site Inspection. TDD No. 95-08-0003.
- [5] VT DEC (Vermont Department of Environmental Conservation). Field Notes for Morse Gravel Pit Preliminary Assessment. 22 April 1991.
- [6] Marsh, D. (Vermont Department of Water Resources). 1974. Memorandum to William Brierley (Vermont Department of Environmental Conservation), RE: Liquid Industrial Waste from Stanley Tool, Shaftsbury, Vermont. 19 December.
- [7] Cropley, T. 1992. Assistant Hazardous Materials Specialist (Vermont Department of Environmental Conservation). Memorandum to Morse Gravel Pit File (No. 770192). RE: Sampling Visit - June. 10 July.
- [8] EPA (U.S. Environmental Protection Agency). 1990. Resource Conservation and Recovery Information System (RCRIS) Superfund Program, Region I. Printout dated 7 July.
- [9] EPA (U.S. Environmental Protection Agency). 1990. Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Superfund Program, Region I. Printout dated 7 June.
- [10] USGS (U.S. Geological Survey). 1983. Bedrock Geologic Map of Massachusetts. Edited by E-an Zen.
- [11] Perry, A. (START). 1995. Phone Conversation Record with Mr. Jeff Shultz (New England Climatic Data Center). Re: Mean Annual Precipitation Rate. TDD No. 95-08-0003. 28 September.
- [12] Perry, A. (START). 1995. Phone Conversation Record with the Town of Clarksburg. Re: Public Water Distribution System in Clarksburg, MA. TDD No. 95-07-0060. 27 September.

**MORSE GRAVEL PIT**  
**REFERENCES (Continued)**

- [13] Reserved.
- [14] Perry, A. (START). 1996. Phone Conversation Record with Clerk at Petersburg Town Hall. RE: Public Water Distribution System in Petersburg, NY. TDD No. 95-08-0003. 27 February.
- [15] Perry, A. (START). 1996. Phone Conversation Record with Clerk at Pownal Town Hall. RE: Public Water Distribution System in Pownal, VT. TDD No. 95-08-0003. 27 February.
- [16] Perry, A. (START). 1996. Phone Conversation Record with Clerk at Stamford Town Hall. RE: Public Water Distribution System in Stamford, VT. TDD No. 95-08-0003. 27 February.
- [17] Perry, A. (START). 1995. Phone Conversation Record with Mr. Guy LaBonte (North Adams Town Engineer). Re: Public Water Distribution System in North Adams, MA. TDD No. 95-07-0060. 1 September.
- [18] Perry, A. (START). 1995. Phone Conversation Record with Mr. Richard Peterson (Williamstown Water Department). RE: Public Water Distribution System in Williamstown, MA. TDD No. 95-07-0060. 5 September.
- [19] Frost Associates. 1995. Project Note, Morse Gravel Pit. Re: Population and Private Well Users. TDD No. 95-08-0003. 9 November.
- [20] Perry, A. (START). 1996. Phone Conversation Record with Mr. Chet McKenzie (Vermont Department of Fish & Wildlife). RE: Use of the Hoosic River in Pownal, Vermont. 1 May.
- [21] FWS (U.S. Fish & Wildlife Service). undated. National Wetlands Inventory Map, North Adams Quadrangle, MA.
- [22] FWS (U.S. Fish & Wildlife Service). undated. National Wetlands Inventory Map, Williamstown Quadrangle, MA.
- [23] FWS (U.S. Fish & Wildlife Service). undated. National Wetlands Inventory Map, Pownal Quadrangle, VT.
- [24] FWS (U.S. Fish & Wildlife Service). undated. National Wetlands Inventory Map, North Pownal Quadrangle, VT.

**MORSE GRAVEL PIT**  
**REFERENCES (Concluded)**

- [25] USGS (U.S. Geological Survey). 1993. Water Resources Data Massachusetts and Rhode Island Water Year 1993. Water Data Report MA-RI-93-1.
- [26] State of Vermont Agency of Natural Resources. 1996. Letter from Mr. Everett Marshall (Department of Fish and Wildlife). RE: Rare and Endangered Species, North Adams Landfill, North Adams, MA. Vermont Nongame and Natural Heritage Program. 24 January.
- [27] New York State Department of Environmental Conservation. 1996. Letter from Mr. Nicholas B. Conrad (Information Services New York Natural Heritage Program). RE: Rare and Endangered Species along the Hoosic River. New York Natural Heritage Program. 12 March.
- [28] EPA. 1996. Letter from Mr. Greg Charest (United States Environmental Protection Agency). RE: Rare and Endangered Species Report Morse Gravel Pit, Pownal, Vermont. 17 April 1996.
- [29] Perry, A. (START). 1996. Phone Conversation Record with Mr. Joe Sezenpaniak (Berkshire-Pittsfield Septic Company). RE: Dumping in Morse Gravel Pit. TDD No. 95-08-0003. 22 May.
- [30] Perry, A. (START). 1996. Phone Conversation Record with Mr. Tim Raymond (Vermont Water Supply Division). RE: Municipal water systems in Pownal, Vermont. TDD No. 95-08-0003. 12 June.